

# THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA LIMITED

AR48

annual report

**1963**





The 750 tons per day concentrator at Benson Lake on northern Vancouver Island was built by Cominco and treats the ore from the nearby mine of Coast Copper Company, Ltd., a subsidiary. Operation commenced in August, 1962.

AR48

THE  
CONSOLIDATED MINING AND SMELTING  
COMPANY OF CANADA  
LIMITED

ADDRESS TO SHAREHOLDERS  
AT THE ANNUAL MEETING IN  
MONTREAL

APRIL 25, 1963

MAY 14 1963

*by*

W. S. KIRKPATRICK

*President*



*The following Address was delivered by  
Mr. W. S. Kirkpatrick at the Annual Meeting  
held in Montreal on 25th April, 1963:*

## **FINANCIAL RESULTS**

Copies of the 57th Annual Report of the Directors of your Company were mailed to all shareholders on the 27th March last and are available to everyone present. Net earnings for the year at \$23,227,000 were 8% higher than the previous year and were equivalent to \$1.42 per share compared to \$1.31 in 1961. Despite low prices for lead and zinc, profits from the sale of metal products were about the same as in 1961. The improvement in earnings is attributable in large part to the higher revenues realized from the sale of chemical and fertilizer materials. Sales of these latter products account for approximately one-third of the Company's gross revenue.

In addition, several other factors contributed to the better earnings. Since about 70% of our total sales is made in export markets, payment for which is received in United States and Sterling funds, the increase during 1962 in the premium of these currencies over the Canadian dollar contributed markedly to the increase in the Company's profits. Another important but less evident factor is the effect of the substantial investment in programs of plant rehabilitation and modernization undertaken during the last ten to fifteen years. The resulting improvements in production techniques and processes are now apparent in the increased efficiency and productivity of our plants, so that, despite low prices and rising labour costs, profit margins on all principal products have been maintained.

## **OPERATIONS AND PRODUCTION**

Except for the losses occasioned by sabotage of the Kootenay Lake transmission line referred to in the Annual Report and with the exception of the lead smelter and refinery, all plants operated at capacity during the past year. Operation of the lead plant was below maximum capacity with the level of production determined by the availability of lead bearing materials. On the other hand, in 1962 the Company's production of zinc and fertilizers achieved new record levels. All major products were successfully marketed and inventories were at normal or below normal levels at year end.

In recent years, about 10% of our combined lead and zinc production has come from the reclamation of stockpiles of zinc plant residues and

lead blast furnace slag, with zinc being the predominant metal in both cases. The zinc plant residue stockpile has now been reclaimed and the remainder of the slag will be retreated during 1963. In order, partially, to replace these sources of lead and zinc until concentrates from Pine Point Mines Limited become available in 1966, the mining program at the Sullivan Mine at Kimberley has been temporarily modified to increase production and, more particularly, to draw from areas with a favourable zinc content.

The effect of this temporary revision to the long term mining plan of the Sullivan is to defer the extraction of pillar ore in favour of increased production from lower level stopes. As a result, the Sullivan ore grade will be somewhat higher during the next several years than would otherwise be the case. This means, of course, that in three to four years it will be necessary to reverse this practice in order to return to the planned program which will ensure the optimum extraction of ore from the Sullivan. Thus, for a time following 1966 the production of ore extracted from pillars will be increased with a consequently slightly lower grade. However, during that time it is anticipated that lead and zinc concentrate production from Pine Point will more than offset the lower metal production from the Sullivan.

The performance of our new copper mine, the Wedge in New Brunswick, is very satisfactory. As was anticipated, milling of the ore is difficult in keeping with the general experience with the fine grained ores of this region. The ore grade so far has been appreciably higher than forecast. Ore production from the mine of our subsidiary, Coast Copper Company Limited on northern Vancouver Island, which commenced in August 1962, is now at the planned rate but the ore grade has been lower than the forecast of reserves. The ore is being concentrated in the adjoining Benson Lake mill owned by Cominco, and a good grade of copper concentrate is being produced with a very good recovery.

All plants of the Chemical and Fertilizer Division operated satisfactorily at a high level. In spite of continuing low market prices, the overall returns on fertilizer sales were higher in 1962 than in 1961. The operating profit per unit of plant food sold has shown steady improvement over the last four years.

In line with our policy of keeping our fertilizer products in the forefront with respect to grade and quality, we will start producing and marketing during this coming summer an entirely new form of ammonium nitrate developed by our staff. This is denser and harder than presently available materials and will show numerous advantages in

handling, storage and application. The addition to the Kimberley phosphate plant now under construction is designed to produce new higher grades of ammonium phosphate. We are also developing new high analysis chlorine-free potash fertilizers in conjunction with our chlor-alkali operation.

## **MARKETING**

Obviously, marketing is a most important phase of the Company's activities, and to meet the intensive competition existing today in the markets of the world, our program of product development and customer service is continually being expanded. Further, since approximately three-quarters of the Company's products are exported, we have to keep in close and continuous contact with the ever-changing developments in foreign markets.

During the past year, the prices of lead and zinc in the United Kingdom reached low levels. In our opinion, these depressed prices in this important marketing area were caused, at least in part, by the nature of the London Metal Exchange pricing mechanism. In the past, the London Metal Exchange quotations for lead and zinc may have reasonably reflected the world supply/demand situation, but such is no longer the case as an increasing number of countries and trade areas seek to protect their domestic mining and smelting industries by establishing quotas, tariffs and other barriers to trade. The cumulative effect of these has been to isolate the London Metal Exchange, so that today it has become a hypersensitive pricing instrument reflecting a highly localized supply/demand market to which surplus world production migrates. Because of its growing isolation and sensitivity, even statistically insignificant world surpluses seriously depress the London quotation. This situation is detrimental to the welfare of the world's lead and zinc industry because consumers tend to design away from commodities which fail to exhibit reasonable price stability. This must be corrected, and we are considering various possible courses of action.

By the end of the year, world stocks of lead were substantially lower than at the end of 1961 and are continuing to decline. With the automobile industry operating at a high level of activity, consumption of lead during 1963 should be at a relatively high rate. While zinc production and consumption in 1962 were substantially in balance, consumption continues to improve in North America, Europe, Japan, India and other countries, and we anticipate that, if stable economic conditions continue, the increased production of zinc now planned in the next few years will be absorbed by the market. Prices of both lead and zinc have



strengthened in recent weeks and we believe that this trend to more realistic prices will continue.

As you know, the fixed United States import quotas have remained unchanged since they were first introduced in October, 1958, and have prevented this Company and other foreign producers from maintaining a share of the growth in the United States. It is clearly unreasonable to fix imports in key commodities, such as lead and zinc, with no flexibility to meet changing conditions either within or outside the country. It is significant to note that a number of companies in the United States are urging their removal or modification. We continue to do all we can in this direction through the Canadian Government.

Unquestionably, purchases for the United States Government stockpiles in the early years of the last decade resulted in undue stimulus to the production of lead and zinc, and thereby contributed to the oversupply situation which has existed for the last several years. Early in 1962, on instructions from the Administration, an investigating committee of the United States Government was set up to study its stockpiles. A recent report of this committee states that the stockpiles contain large surpluses of materials including lead and zinc, and has recommended procedures for their disposal.

We concur with the view of the American Mining Congress that this whole matter is being dealt with in too cursory a manner and also with their opposition to any liquidation of lead and zinc from United States government stocks until the question has been more thoroughly studied. A clear definition of strategic requirements is required, together with a thoroughly considered method of liquidating surpluses, in order to minimize disruption of the domestic and international industry. The problem of stockpile disposal is so complex that long and careful study by an impartial body is required to effect a fair solution. It should be remembered that, in the legislation covering commodity acquisition, the United States Government made a commitment to refrain from engaging in a casual program of disposal of these stockpiles. For this reason we believe that the industry is now entitled to further assurance from the United States Government that no precipitate action will be taken.

With regard to the marketing of chemical and fertilizer products, paralleling the improved product developments mentioned earlier, we are also improving marketing methods through an extended program of assistance to dealers and distributors. We believe that by these and other means the Company will maintain its share of the growing fer-

tilizer consumption and find profitable markets for the disposal of the output of our expanding fertilizer operations.

International trade relations continue to be of great concern to our Company. An important development of 1962 was the approval of the United States Trade Expansion Act in October. Although some of its provisions are not applicable at present because of the collapse of the United Kingdom negotiations at Brussels, this Act has possibilities for broad reductions in United States trade barriers which might bring about considerable mutually beneficial expansion in world trade.

In these changing times, when interdependence between nations is increasing and when the rising standards of living of many nations are creating widespread demand for goods of all kinds, it is particularly important that Canada be outward-looking, flexible and progressive in external trade relations. It would, I believe, be a great mistake to retreat into any sort of isolationism behind higher tariff barriers. On the contrary, we must continually try to free the channels of trade so as to increase the flow of goods and services among the nations of the world.

## **RESEARCH AND EXPLORATION**

Many research and product development projects are active, several of which are giving assurance of becoming commercially important. During the last six or seven years, the Company has cooperated with others in a number of research programs aimed at expanding the uses of lead and zinc. The results of this cooperative research are now becoming apparent, particularly in the case of zinc where a consistent growth in consumption can be observed.

In our new offices, which you have an opportunity of seeing today, we have made extensive use of lead and zinc products. These include zinc die castings produced by our subsidiary, National Hardware Specialties Limited, zinc extrusions produced by our own plants and lead laminates in the construction of room partitions for very effective sound absorption.

Through pioneer research efforts, the Company has achieved a position of leadership as a major supplier of electronic materials. Although markets for these materials have not grown as rapidly as originally anticipated, we continue to have confidence that markets for these will expand in the future.

Recent tax legislation, aimed at encouraging research activity in Canada, is a most desirable and welcome development. However, it should be noted that the present legislation does not recognize the high



level of research expenditures consistently undertaken over many years by certain major companies, such as Cominco. It is to be hoped that this defect will be removed by future amendments.

The Company is continuing an active program of exploration for new mines in Canada and other countries. In line with the current trend in the industry, an increasingly large proportion of our exploration projects are being carried out in participation, both financially and technically, with other mining companies.

Our Company, like many others in Canada, was founded on natural resources and has grown and diversified by adding ever-increasing stages of manufacturing of the resource products. We thus have inherent interests in both manufacturing and primary resource development. While we recognize the importance of manufacturing and service industries in providing employment in Canada, we feel that the basic significance of our resource industries is in danger of being overlooked. In hearings before Royal Commissions, Tariff Boards and the like, the case of the resource industries must be adequately presented to ensure due recognition in any resulting decisions. Our Company continues to do all in its power in this regard both individually and through various trade associations.

## **CAPITAL EXPENDITURES**

In 1962, consolidated net capital expenditures amounted to \$12,762,000, approximately \$2,000,000 over that for 1961. The Benson Lake concentrator for the Coast Copper mining operation and the extension and modernization of the zinc roasting and leaching capacity at Trail were completed during the year.

Installation of the third 90-mw generator at the Waneta hydroelectric plant on the Pend d'Oreille River near Trail is approaching completion. Coupled with the recent agreement between the Company and the Bonneville Power Administration for the exchange of power, this unit will bring our supply of firm power to a satisfactory level for the present and immediate future. Surveying of a right-of-way for the tie-line with Bonneville Power Administration has started and the line is expected to be completed and energized late in 1964.

At Trail, construction of a 50% addition to the chlor-alkali plant has commenced and completion is scheduled for January, 1964. The design is such that a further increase of the same size can be added very economically. At Kimberley, good progress is being made in the construction of the second unit of the fertilizer plant which will double its present production capacity to an annual output of 170,000 tons of

ammonium phosphate fertilizers. In addition to those already in the course of construction, further additions and expansions of the chemical and fertilizer plants are presently under consideration and construction of these will probably commence during the current year.

The addition of a second electrothermic reduction furnace to the pig iron plant at Kimberley which will treble the plant's present capacity to 110,000 tons annually, is under construction.

At the property of Pine Point Mines Limited south of Great Slave Lake, a \$3,000,000 construction and development program is planned for this year. Heavy equipment and building materials have been delivered to the property by winter road and construction will start in May on fifty-three houses, two bunkhouses, a cookhouse-recreational hall and installation of services for a townsite. Test stripping for the planned open-pit mining operation and some diamond drilling will also be carried out. Succeeding stages of the program provide for the development of open pits and the construction of a 5,000 ton concentrator and ancillary service buildings. Production from the property is scheduled to commence with completion of the Great Slave Lake Railway in 1966.

The work to be undertaken during this year will be financed by temporary advances of cash from your Company. A final decision has not yet been reached regarding the method of financing the total cost of bringing Pine Point into production.

At the Douglas phosphate property in Montana, a contract for construction of the concentrator has been let and operation is expected to commence early in 1964 to coincide with the completion of the extension of the fertilizer plant at Kimberley.

At this time, it appears that total capital expenditures during 1963 for new plants and additions to existing plants will be in the neighbourhood of \$20,000,000.

## **PROSPECTS FOR 1963**

During the first quarter of this year, sales of metal products were less than a year ago but were offset by a substantial increase in sales of fertilizers, resulting in the Company's net earnings being the same as that for the corresponding period of 1962. In view of the firm prices and excellent demand for the Company's products already evident, we believe this rate of earnings will be maintained and, possibly, show some improvement during the balance of the year.



MAR 31 1967

# The Consolidated Mining and Smelting Company of Canada Limited

HEAD OFFICE: 630 DORCHESTER BLVD. W., MONTREAL, CANADA

## Directors

L. J. BELNAP	GORDON FARRELL	W. S. KIRKPATRICK*
A. L. BISHOP	R. D. HARKNESS	R. S. McLAUGHLIN
N. R. CRUMP*	G. A. HART	D. R. McMASTER
R. A. EMERSON*	R. HENDRICKS*	R. D. PERRY*
R. E. STAVERT*	H. G. WELSFORD	

\*Member of Executive Committee

## Officers

R. E. STAVERT <i>Chairman</i>	W. S. KIRKPATRICK <i>President</i>	
N. R. CRUMP <i>Vice-President</i>	R. HENDRICKS <i>Executive Vice-President</i>	R. D. PERRY <i>Vice-President at Montreal</i>
D. D. MORRIS <i>Vice-President and General Manager</i>	A. O. WOLFF <i>Vice-President, Research and Development</i>	H. T. FARGEY <i>Vice-President, Sales</i>
G. A. WALLINGER <i>Vice-President and Comptroller</i>	F. L. HALLAM <i>Secretary-Treasurer</i>	J. H. SALTER <i>Assistant General Manager</i>
L. O. REID <i>Assistant Secretary</i>	K. E. CLARE <i>Assistant Treasurer</i>	

## Transfer Agents

THE ROYAL TRUST COMPANY, MONTREAL  
THE ROYAL TRUST COMPANY, VANCOUVER  
CANADA PERMANENT TRUST COMPANY, TORONTO  
BANK OF MONTREAL TRUST COMPANY, NEW YORK

## Registrars

MONTREAL TRUST COMPANY, MONTREAL  
MONTREAL TRUST COMPANY, VANCOUVER  
CROWN TRUST COMPANY, TORONTO  
CHEMICAL BANK NEW YORK TRUST COMPANY, NEW YORK

# Comparative Highlights

	1963	1962	1961	1960	1959
Sales of all products . . . . .	\$140,307,000	\$131,101,000	\$124,403,000	\$115,649,000	\$110,084,000
Net earnings. . . . .	29,823,000	23,227,000	21,435,000	23,498,000	16,704,000
Net earnings per share . . . . .	\$1.82	\$1.42	\$1.31	\$1.43	\$1.02
Dividends declared . . . . .	21,294,000	18,018,000	16,380,000	16,380,000	13,104,000
Dividends per share . . . . .	\$1.30	\$1.10	\$1.00	\$1.00	\$0.80
Income, mining and property taxes . . .	19,709,000	16,995,000	16,589,000	15,950,000	12,243,000
Depreciation. . . . .	10,927,000	10,433,000	10,307,000	9,700,000	9,392,000
Capital expenditures . . . . .	22,732,000	13,104,000	10,877,000	16,501,000	7,895,000
Working capital . . . . .	101,115,000	103,107,000	100,118,000	96,149,000	95,925,000
Cash and marketable securities. . . . .	72,351,000	71,887,000	63,320,000	65,704,000	66,580,000
Inventories of raw materials and products	26,665,000	27,763,000	30,427,000	30,943,000	27,476,000
Shareholders' equity . . . . .	192,514,000	183,980,000	178,768,000	173,703,000	166,587,000
Equity per share . . . . .	\$11.75	\$11.23	\$10.91	\$10.60	\$10.17
Number of employees at year-end . . .	7,327	7,336	7,521	7,351	6,985
Number of shareholders at year-end . .	35,218	35,805	34,234	35,007	34,481

## Output of Principal Products

YEAR	(1) Lead Short Tons	(1) Zinc Short Tons	(1) Gold Ozs.	(1) Silver Ozs.	Cad- mium Short Tons	Bis- muth Short Tons	(1) Tin Short Tons	Solid Fertilizer Short Tons	Liquid Fertilizer Short Tons
1894 to 1953 . . . . .	5,390,114	3,824,460	3,525,679	290,992,828	7,762	2,013	4,198	6,655,051	
1954 . . . . .	166,379	147,776	96,395	11,901,184	467	113	173	693,949	595
1955 . . . . .	149,795	190,910	89,071	10,082,187	759	80	252	678,802	10,193
1956 . . . . .	149,262	193,041	97,428	11,583,530	884	78	328	673,044	20,449
1957 . . . . .	144,017	189,295	95,403	10,877,532	901	73	400	630,622	32,373
1958 . . . . .	134,827	193,514	69,962	12,875,160	643	86	360	656,697	45,714
1959 . . . . .	140,881	194,499	66,117	9,367,029	838	91	246	620,162	56,046
1960 . . . . .	160,079	194,989	77,832	8,690,244	918	124	290	664,200	61,942
1961 . . . . .	172,365	193,649	66,169	8,816,141	963	152	399	651,339	63,189
1962 . . . . .	152,743	199,393	63,927	6,667,813	1,059	115	396	694,185	50,408
1963 . . . . .	155,881	194,159	67,040	6,847,606	1,019	89	508	694,611	46,491
1894 to date. . . . .	6,916,343	5,715,685	4,315,023	388,701,254	16,213	3,014	7,550	13,312,662	387,400

(1) Includes metal sold in unrefined products.



# 58th Annual Report of the Directors

MONTREAL, P.Q., 12TH MARCH, 1964

*To the Shareholders of The Consolidated Mining and Smelting Company of Canada Limited*

The year 1963 was characterized by a high level of business activity throughout the world accompanied by generally stronger commodity prices including those for lead and zinc. The Company's plants operated at substantially capacity levels and all production was marketed, so that the year ended with inventories below normal. As a result, earnings were 28% above those in 1962 and higher than for any year since 1956.

The consolidated financial statements and Auditors' Report and other information covering the affairs of the Company for the year ended 31st December, 1963 follow:

## Financial

Consolidated revenue from all sources amounted to \$143,791,000 in 1963 compared with \$133,863,000 in 1962. Sales of products were \$140,307,000 compared with \$131,101,000 in 1962.

After providing \$16,900,000 for income and mining taxes and \$10,927,000 for depreciation of plants, the consolidated earnings for the year were \$29,823,000 compared with \$23,227,000 in 1962. Regular dividends of 80¢ per share and extra dividends of 50¢ per share were declared amounting to \$21,294,000.

The increased earnings were almost entirely due to the higher revenue obtained from metallurgical products, particularly lead, zinc, silver and cadmium. Gross revenue from chemical and fertilizer sales increased because of greater volume but prices and costs remained substantially the same as in 1962.

There was some improvement in revenue from export sales in 1963 due to a modest increase in the value of United States and sterling funds in relation

to Canadian currency. During 1963 the average premium of the United States dollar increased to 7 $\frac{21}{32}$ % from 6 $\frac{7}{8}$ % in 1962.

Consolidated capital expenditures amounted to \$22,732,000. The larger items were the second fertilizer unit \$6,191,000 and pig iron extension \$1,067,000 at Kimberley, new Douglas mine of the Montana Phosphate Products Company \$4,344,000, and advances to Pine Point Mines Limited \$2,687,000.

This year a few changes have been made in the terminology and form of the financial statements.

At December 31st, working capital amounted to \$101,115,000 a decrease of \$1,992,000 during the year, accounted for as follows:

### Sources:

Net earnings.....	\$29,823,000
Add: Charges deducted in determining net earnings not requiring an outlay of funds:	
Depreciation.....	10,927,000
Income tax provision for future years.....	450,000
Sundry non-cash items.....	17,000
Elimination of income tax acceleration.....	950,000
	<hr/>
	\$42,167,000

### Applications:

Dividends declared.....	\$21,294,000
Capital expenditures.....	22,732,000
Increase in sundry non-current items.....	133,000
	<hr/>
	\$44,159,000

Decrease in working capital.....	<hr/> <hr/> \$ 1,992,000
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## Metal Production and Sales

Lead production was 155,881 tons compared with 152,743 tons in 1962, and zinc production 194,159 tons compared with 199,393 tons. The metal was derived approximately 73% from Sullivan concentrates, 14% from concentrates from other company mines, 9% from purchased ores and concentrates and 4% from lead blast furnace slag. The lead slag included that recovered from a stockpile at the Company's Trail plant, which is nearing exhaustion, and that from a number of old stockpiles remaining from various early smelting operations in the district.

In 1963 free world consumption of lead at 2,737,000 tons and zinc at 3,201,000 tons established new high levels, exceeding those of 1962 by more than 5%. Production also established new records but failed to keep pace with consumption so that stocks declined and prices rose during the year. The shortage was particularly noticeable in the United States where producers' stocks fell sharply to the lowest level in about seven years.

Average prices per pound on the London Metal Exchange, in equivalent Canadian funds, were 8.55¢ for lead and 10.35¢ for zinc, both well above the 1962 prices of 7.55¢ and 9.04¢. Prices at the year-end were 10.48¢ and 12.76¢ respectively. In Canada the price of lead which was 10.0¢ per pound at the beginning of 1963, improved steadily to close at 12.5¢, the highest since 1957. The United States price showed a similar increase from 10.0¢ at the beginning to 12.5¢ at the end of the year. Zinc prices in both Canada and the United States were 11.5¢ at the beginning of the year and increased to 13.0¢ at year-end.

The distribution of the total lead and zinc sold during the year was about 29% to Canada, 25% to the United States, 34% to the United Kingdom and continental Europe and 12% to other countries. A significant change in the distribution compared with former years is the declining proportion to the United States, a market which is restricted by import quotas which prevent Canadian producers from sharing in the growth in consumption in that country.

To promote sales of Cominco's metal in Europe and particularly the Common Market countries, a subsidiary, Cominco-Gardner GmbH, was established in Dusseldorf, West Germany, in conjunction with Henry Gardner & Co. Limited in London, our United Kingdom representatives.

Silver production at 6,848,000 ounces, of which 74% came from company mines, was at about the same level as in the previous year and sales were in line with production. For the sixth successive year world

consumption of silver exceeded mine output so that the price, which had risen strongly in 1962 to 120.5¢ U.S. per troy ounce, continued to increase. In September it reached 129.3¢ where it has remained, stabilized by sales from United States Treasury stocks.

Production of gold was 67,040 ounces compared with 63,927 ounces in 1962, nearly all of which was produced at the Con operation.

Cadmium production was 1,019 tons compared with 1,059 tons in 1962, representing recovery of available material. Demand continued to exceed supply throughout the year, in spite of release of 2 million pounds from United States Government stockpiles, and prices increased by about 70% during the year closing in London at \$3.36 U.S. per pound.

Production and sales of pig iron, bismuth, indium and tin concentrates were normal. In the three years that the pig iron plant at Kimberley has been in production an increasing understanding of the process and equipment has resulted in a very satisfactory operation. A new process has been developed which will allow recovery of increased quantities of indium from the company's raw materials. Activities in connection with compound semi-conductors and thermoelectric materials have been reduced in view of limited demand but sales of high purity metals and preforms showed a slight increase. As in former years, antimony was produced and marketed in the form of antimonial lead. Prices increased sharply during the year on account of reduced world supplies.

## Chemical and Fertilizer Production and Sales

Fertilizer production at 741,102 tons compared with 744,593 tons in 1962, the slight reduction from the record level of the previous year reflecting changes in product mix. With a strong demand in our North American areas, total sales of fertilizers exceeded 800,000 tons in 1963, 6% above 1962 and the highest to date. Year-end inventories were below normal.

Canadian sales established a new record for the third consecutive year, attributable mainly to the continued prosperity on the Canadian Prairies and to more widespread awareness of the profitability of fertilizer use on western farms. In our United States market areas demand was also very good but product availability restricted sales increases to a relatively small quantity achieved by inventory reduction and purchase and resale of other manufacturers' products. Prices obtained in Canadian markets improved slightly during 1963 but returns from United States sales were lower.



Off-shore sales were again reduced and were largely limited to ammonium sulphate and urea shipped to Pakistan under the Government's Colombo Plan. During the year world demand for these two products strengthened sufficiently to bring about a recovery in price to more normal levels after several years of over-supply with severely depressed prices.

To take advantage of market opportunities, plans were completed during the year for substantial additions to our plants, to be in operation by 1965 and which will increase fertilizer productive capacity to about one million tons per year. Included are an extension to the sulphuric acid plant at Trail, which will treat sulphur from Pine Point concentrates and allow increased ammonium phosphate production; a 36,500 tons per year addition to the Trail ammonia plant; a plant at Trail to produce 25,000 tons per year of zinc M-N-S fertilizer; sulphuric and phosphoric acid plants at Kimberley and a fertilizer plant at Regina to produce 83,000 tons per year of ammonium phosphate; and a 45,000-ton per year extension to the Calgary urea plant. These are in addition to the current 83,000-ton per year extension to the Kimberley fertilizer plant, some sections of which were in operation before the close of the year.

During 1963 production commenced at Calgary of an entirely new form of ammonium nitrate developed by our staff. It is denser and harder than presently available materials and is finding ready market acceptance for agricultural use, replacing nitraprills. The nitraprill process had been originated by Cominco engineers during World War II and has been widely adopted throughout the industry.

Sales of chemicals for non-fertilizer purposes were 50% higher than in 1962 with substantial gains in sulphuric acid. The full output of our chlor-alkali plant was marketed. Increased quantities of ammonium nitrate for explosive use and of feed-grade urea and sulphur dioxide were sold. Nitro-Carbo-Nitrate (N-C-N), the ammonium nitrate explosive, is finding increasing use in all the Company's mining operations.

## Mining Operations

Ore production from the Sullivan mine at Kimberley in British Columbia was 2,595,000 tons, substantially the same as 1962 production, namely, 2,583,000 tons. Stope development was started in preparation for production from the second level recently completed from the 500-foot extension of the main shaft. As explained in detail in the President's address at the Annual Meeting last year, a copy of which was sent

to all shareholders, the program at the Sullivan mine has been temporarily modified to increase metal production, particularly zinc. This is to replace in part metal previously available from residue and slag stockpiles at Trail, until concentrates from Pine Point Mines become available.

Production from the Bluebell lead-zinc mine at Riondel, B.C., was 256,000 tons compared with 238,000 tons in 1962. Because of excessive flows of hot water and gas, development work on the bottom level was discontinued and lateral development on other levels increased to maintain production. At the H.B. zinc-lead mine near Salmo, B.C., production totalled 474,000 tons compared with 469,000 tons in 1962. The Con mill at Yellowknife, Northwest Territories, treated 192,000 tons compared with 196,000 tons in 1962. The winze at the Con mine was deepened by two levels to the 3,900-foot level and workings are being driven out to the ore areas. In view of the limited ore reserves at this property, exploration for extensions of the ore bearing formations is actively in progress.

The Company's Benson Lake concentrator on Vancouver Island treated 281,000 tons of copper ore from the adjacent mine of Coast Copper Company Limited, a subsidiary. Lower level workings from earlier exploration of this mine are being rehabilitated and prepared for production. This was the first full year of operation for the mill whose designed capacity is 273,000 tons. An extension is being installed to recover 80,000 tons per year of high-grade magnetite iron concentrates from the tailings. Production at Cominco's Wedge copper mine in New Brunswick was 263,000 tons compared with 224,000 tons in 1962. The ore was concentrated in facilities rented from Heath-Steele Mines Limited. Additional flotations cells were installed during the year improving throughput, recovery and concentrate grade. Copper concentrates from both these operations were shipped to Japan under long-term contracts, as will be the case with the magnetite.

The phosphate mines of the Montana Phosphate Products Company produced 464,000 tons of phosphate rock to meet Trail and Kimberley fertilizer requirements. Production in 1962 was 425,000 tons. Underground development at the new Douglas mine, also in Montana, and construction of the adjoining concentrator made satisfactory progress with operation scheduled for the spring of 1964 in line with expanding fertilizer production.

At the large lead-zinc property of Pine Point Mines Limited, south of Great Slave Lake, a modern town-site was laid out and services installed in co-operation

with the Department of Northern Affairs and National Resources. Houses for staff and construction personnel, bunkhouses and combined recreational hall and cookhouse were constructed. Clearing and stripping of one orebody, clearing of the mill site and excavation for crushing equipment was done. Mill construction and preparation for mining are proceeding very actively with much of the steel and equipment being shipped to the site during the early months of 1964. In all of this work Cominco continues to act as manager and agent for Pine Point Mines Limited.

The Canadian National Railway Company is making good progress on the railway being constructed from Grimshaw, Alberta, to Hay River, N.W.T., with a branch line to the mine property, and now expect to have the line in operation before the end of 1965. A contract has been negotiated with the Northern Canada Power Commission, who will construct a hydro plant and supply electric power for the mining and milling operations at Pine Point. Assuming both these services are available, it is expected that mining operations will commence some time in the late fall of 1965. It is anticipated that arrangements for financing the large expenditures required to bring the property into production will be completed by Pine Point Mines Limited during the first half of 1964. Cominco will underwrite the offering to that company's shareholders.

In order to provide for treatment of Pine Point concentrates an addition has been authorized to the zinc plant at Trail to bring the capacity to 235,000 tons per year. With the new roaster and other changes to the zinc plant completed in 1962 and a major addition to the sulphuric acid plant under construction, the above project will allow treatment of the whole output of the Pine Point mine at anticipated rates of operation.

## Research and Exploration

Research and exploration are being further expanded because of their basic importance in the long-term stability and growth of the Company. In 1963 total combined expenditures in these fields amounted to \$5½ million compared with \$1¾ million ten years earlier.

Exploration was actively pursued in Western Canada and the Precambrian Shield area with encouraging results. By participation with others, interests were extended to include Ontario, Quebec, Greenland and Ireland. In association with Magnet Cove Barium Company, drilling has discovered a

substantial lead orebody in Missouri. Cominco has a minority interest in Western Mines Limited whose base metal property on Vancouver Island continues to show favourable progress in underground development. New exploration offices were opened in Vancouver and Toronto.

As mentioned elsewhere, a number of major projects were approved during the year to strengthen the Company's fertilizer marketing position. With these there is now under way an expansion program of over \$30 million for fertilizers. To keep abreast of changing techniques and new product developments, major modernization programs are being considered for the Company's older fertilizer plants. Longer range programs are also being developed, including an enlarged research project aimed at developing new types of fertilizer products.

During the year Cominco, in conjunction with Metal Distributors Limited of Calcutta, formed a company known as Cominco Binani Zinc Limited in which Cominco has a 40% interest. The new Indian company will build under Cominco supervision an electrolytic zinc smelter and refinery and a by-product sulphuric acid plant with an annual capacity of 22,000 tons of zinc and 53,000 tons of sulphuric acid.

Over the past few years a program of vertical integration into metal products has been gradually developed, one objective being to assist customers in marketing our products. The initial step was the acquisition of a small die-casting firm in Ontario, National Hardware Specialties Limited, and the acquisition of its plating subsidiary. A further step in this direction is the completion of arrangements to construct in 1964 a plant for production of 2,000 tons per year of high quality, condensed zinc dust. Construction commenced in August on the new Metal Products Research Centre at Sheridan Park near Toronto, with occupancy expected in July 1964. This will greatly facilitate the development of new applications of the Company's metals and permit the acceleration of research in support of established uses.

Encouraging results and growing interest are evident in the use of lead in sound attenuating panels. Sales of zinc anodes for corrosion protection are showing substantial growth and improvements in zinc extrusions are opening up a large market for this product in the decorative trim field. Through the Company's efforts the use of galvanized steel in highway construction is increasing significantly including the erection of the first major all-galvanized highway bridge in North America over the Lizotte River in



Quebec. Cominco continues its active participation in the co-operative research and development programs of the various industry-wide organizations, including particularly the International Lead Zinc Research Organization.

## Engineering and Construction

The Engineering and Purchasing Divisions were extremely busy during 1963 and the tempo will continue and accelerate throughout 1964. In addition to the many projects mentioned elsewhere in this report, a 50% extension of the Trail chlor-alkali plant was completed and satisfactory progress was made on the installation of facilities for receiving and handling phosphate rock concentrates from the Douglas mine and on the construction of the second electrothermic pig iron furnace, both scheduled for completion in 1964. In total, the Company now has definite commitments for new construction amounting to more than \$70 million. To handle these projects together with the normal work load arising from maintenance and improvement of existing plants, a substantial addition has been made to our design and construction staffs and some work has been contracted out.

## Power

Water flows were normal with energy generation meeting demand at 2,976 million kilowatt hours compared with 2,874 million in 1962.

With completion of instrumentation in No. 5 plant at Brilliant in January 1964, all the Kootenay river plants except No. 3 at South Slocan will be remotely controlled from No. 3 plant control room.

The installation of the third 90-m.w. generator at the Waneta power plant was completed in June, permitting No. 2 unit to be overhauled after 10 years' continuous service. It was found to be in good condition.

Late in 1963 work commenced on the construction of the 15-mile 230-kv transmission line from Waneta to Nelway, connecting the Cominco transmission system with that of the Bonneville Power Administration in the United States. When completed in the fall of 1964, this will permit the equichange of power between the two systems to firm up production of the third Waneta unit.

## Personnel

The supply of labour at all operations was generally adequate except for some shortage of journeyman machinists.

Collective wage agreements were in effect during the year covering all Cominco operations. Agreements for our major operations will be up for renegotiation in 1964.

At December 31 the Pension Fund which provides non-contributory pensions to retired employees amounted to \$47,888,000. During the past year 138 pensions were granted, and at the year-end 1,091 employees and widows of former employees were receiving pensions compared with 998 at the end of 1962.

The H.B. mine achieved the distinction of being awarded the John T. Ryan trophy for the fourth time, a record unequalled in Canadian metal mining. The trophy is awarded annually by the Canadian Institute of Mining and Metallurgy for the best safety performance in the industry. Active accident prevention programs were carried on at all operations and the overall incidence of accidents was low, though slightly higher than in 1962.

## Staff Changes

Effective 25th April, 1963 Mr. A. O. Wolff, formerly Director of Research and Development, was appointed Vice-President, Research and Development. On the same date Mr. H. T. Fargey, formerly General Sales Manager, was appointed Vice-President, Sales.

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The Directors take pleasure in expressing their appreciation to all employees for their co-operation and contribution to the continued progress of the Company.

On behalf of the Board,



President.

The Consolidated Mining and Smelting Company of Canada Limited  
and its Wholly-Owned Subsidiary Companies

Consolidated BALANCE S

With Com

Assets

	1963		1962	
<b>Current Assets:</b>				
Cash . . . . .	\$ 6,051,000		\$ 3,698,000	
Notes, loans and other short term investment contracts	22,415,000		25,500,000	
Government and municipal bonds at cost or lower (market value: 1963, \$43,754,000; 1962, \$42,765,000)	43,885,000		42,689,000	
Accounts receivable and accrued revenue, less allow- ance for doubtful accounts . . . . .	22,467,000		20,072,000	
Prepaid charges . . . . .	3,412,000		4,094,000	
Inventories of raw materials and products, valued at cost or market, whichever is lower . . . . .	26,665,000		27,763,000	
Stores and materials, valued at cost less depreciation .	8,255,000	\$133,150,000	8,015,000	\$131,831,000
<b>Investments and Sundry Non-Current Assets:</b>				
Investments in unconsolidated subsidiary companies (including shares at cost 1963, \$13,445,000; 1962, \$12,786,000) . . . . .	19,636,000		16,181,000	
Investments in other companies . . . . .	3,714,000		2,853,000	
	23,350,000		19,034,000	
Less: accumulated provisions against depreciation of investments in mining companies . . . . .	5,577,000		5,577,000	
	17,773,000		13,457,000	
Deferred charges . . . . .	284,000		302,000	
Sundry loans and accounts receivable . . . . .	851,000	18,908,000	699,000	14,458,000
<b>Property, Buildings and Equipment:</b>				
Mines and mineral rights at cost and land, buildings and equipment at cost, less depreciation written off and sales at realized prices . . . . .	165,135,000		152,589,000	
Less: accumulated depletion and depreciation . . .	91,194,000	73,941,000	86,124,000	66,465,000
		\$225,999,000		\$212,754,000



# as at December 31, 1963

res for 1962

## Liabilities and Shareholders' Equity

	1963	1962
<b>Current Liabilities:</b>		
Accounts payable . . . . .	\$ 11,614,000	\$ 10,453,000
Accounts payable to unconsolidated subsidiary companies . . . . .	94,000	154,000
Estimated income and mining taxes payable . . . . .	8,849,000	8,277,000
Dividends payable . . . . .	11,478,000	9,840,000
	<u>\$ 32,035,000</u>	<u>\$ 28,724,000</u>
<b>Accumulated Tax Reductions Applicable to Future Years . . . . .</b>	<b>1,450,000</b>	<b>50,000</b>
<b>Shareholders' Equity:</b>		
Capital:		
Authorized — 20,000,000 shares of no par value; issued and fully paid — 16,381,645 shares . . . . .	23,967,000	23,967,000
Insurance reserve . . . . .	3,946,000	3,941,000
Retained earnings . . . . .	164,601,000	156,072,000
	<u>192,514,000</u>	<u>183,980,000</u>
<b>Commitments and Contingent Liabilities:</b>		
	1963	1962
Commitments under construction in progress estimated not to exceed . . . . .	\$5,900,000	\$2,500,000
Sundry guarantees, commitments and claims (estimated)	3,100,000	3,500,000
Undertaking to cause Pine Point Mines Limited to be provided with funds sufficient to bring its mine into production by December 31, 1966 with a capacity of 215,000 tons of concentrates annually.		
On behalf of the Board:		
R. E. STAVERT } W. S. KIRKPATRICK }	<u>\$225,999,000</u>	<u>\$212,754,000</u>
Directors		

The Consolidated Mining and Smelting Company of Canada Limited  
and its Wholly-Owned Subsidiary Companies

Consolidated Statement of Earnings

For the year ended December 31, 1963

(With comparative figures for 1962)

	1963	1962
Sales of products . . . . .	\$140,307,000	\$131,101,000
Other revenue . . . . .	3,484,000	2,762,000
	<u>143,791,000</u>	<u>133,863,000</u>
Cost of sales:		
Raw materials and products on hand at beginning of year . . . . .	27,763,000	30,427,000
Production, selling and general expenses (legal remuneration 1963, \$141,000; 1962, \$109,000) . . . . .	77,553,000	76,728,000
Customs ores and other materials purchased . . . . .	11,783,000	9,841,000
Executive officers' fees and remuneration . . . . .	525,000	431,000
Directors' fees and remuneration . . . . .	22,000	19,000
	<u>117,646,000</u>	<u>117,446,000</u>
Deduct: raw materials and products on hand at end of year . . . . .	26,665,000	27,763,000
	<u>90,981,000</u>	<u>89,683,000</u>
	52,810,000	44,180,000
Add:		
Income from investments . . . . .	4,502,000	3,839,000
Net gain from sale of investments . . . . .	338,000	41,000
	<u>57,650,000</u>	<u>48,060,000</u>
Deduct:		
Provision for depreciation of plant and equipment . . . . .	10,927,000	10,433,000
Provision for income and mining taxes (1963 — after reduction of \$600,000 for prior years) . . . . .	16,900,000	14,400,000
	<u>27,827,000</u>	<u>24,833,000</u>
Net earnings, to statement of retained earnings . . . . .	<u>\$ 29,823,000</u>	<u>\$ 23,227,000</u>
Net earnings per share . . . . .	\$1.82	\$1.42



## Consolidated Statement of Retained Earnings

For the year ended December 31, 1963

(With comparative figures for 1962)

	1963	1962
Amount at beginning of year . . . . .	\$156,072,000	\$150,863,000
<i>Add:</i>		
Net earnings per statement of earnings . . . . .	29,823,000	23,227,000
	<u>185,895,000</u>	<u>174,090,000</u>
<i>Deduct:</i>		
Appropriation for dividends, \$1.30 per share in 1963 (1962 — \$1.10)	21,294,000	18,018,000
Amount at end of year, to balance sheet . . . . .	<u>\$164,601,000</u>	<u>\$156,072,000</u>

# Auditors' Report

## Statement as to Unconsolidated Subsidiary Companies

Except to the extent of dividends received from unconsolidated subsidiary companies and additions made to the allowance for depreciation of investments, neither profits nor losses of unconsolidated subsidiaries, so far as they concern the parent company, have been dealt with in the accounts of the parent company for 1963 or prior years. The excess of the parent company's proportion of profits over the dividends received is greater than its proportion of losses of unconsolidated subsidiary companies for which no allowance has been made. The balances of profits (less dividends) and losses, as well as development and maintenance expenses of certain unconsolidated subsidiary mining companies which were not in production, are carried forward in the accounts of the subsidiary companies.

VANCOUVER, B.C., FEBRUARY 28, 1964.

HELLIWELL, MACLACHLAN & Co.,  
*Chartered Accountants.*

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## Auditors' Report to the Shareholders

We have examined the consolidated balance sheet of The Consolidated Mining and Smelting Company of Canada Limited and its wholly-owned subsidiary companies as at December 31, 1963, and the related statements of earnings and retained earnings for the year ended on that date and have obtained all the information and explanations we have required. Our examination has included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, according to the best of our information and the explanations given to us and as shown by the books of the companies, the balance sheet and the related statements of earnings and retained earnings are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the company and its wholly-owned subsidiaries as at December 31, 1963, and the results of their operations for the year ended on that date, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

VANCOUVER, B.C., FEBRUARY 28, 1964.

HELLIWELL, MACLACHLAN & Co.,  
*Chartered Accountants.*

# Senior Organization

## Operations

D. D. MORRIS, <i>Vice-President and General Manager</i> . . . . .	Trail, B.C.
J. H. SALTER, <i>Assistant General Manager</i> . . . . .	Trail, B.C.
J. BRYDEN, <i>Assistant to the General Manager</i> . . . . .	Trail, B.C.
B. E. HURDLE, <i>Manager, Mines Division</i> . . . . .	Trail, B.C.
R. R. MCNAUGHTON, <i>Manager, Metallurgical Division</i> . . . . .	Trail, B.C.
E. A. G. COLLS, <i>Manager, Chemical and Fertilizer Division</i> . . . . .	Trail, B.C.
J. V. ROGERS, <i>Manager, Engineering Division</i> . . . . .	Trail, B.C.
G. S. ORTNER, <i>Manager, Personnel Division</i> . . . . .	Trail, B.C.
R. E. WALTON, <i>Manager, Purchasing Division</i> . . . . .	Trail, B.C.
S. M. ROTHMAN, <i>General Superintendent of Kimberley Operations</i> . . . . .	Kimberley, B.C.

## Sales

H. T. FARGEY, <i>Vice-President</i> . . . . .	Montreal, Que.
A. V. MARCOLIN, <i>Manager, Metal Sales</i> . . . . .	Montreal, Que.
A. WILKINSON, <i>Manager, Chemical and Fertilizer Sales</i> . . . . .	Montreal, Que.
B. R. LOVE, <i>General Traffic Manager</i> . . . . .	Montreal, Que.

## Finance

G. A. WALLINGER, <i>Vice-President and Comptroller</i> . . . . .	Montreal, Que.
E. G. RANDALL, <i>Assistant Comptroller</i> . . . . .	Trail, B.C.

## Exploration

R. J. ARMSTRONG, <i>Manager</i> . . . . .	Montreal, Que.
G. N. MOORE, <i>General Superintendent</i> . . . . .	Montreal, Que.

## Legal

C. H. B. FRERE, <i>General Solicitor</i> . . . . .	Montreal, Que.
M. H. MASON, <i>Assistant General Solicitor</i> . . . . .	Trail, B.C.

## Research and Development

A. O. WOLFF, <i>Vice-President</i> . . . . .	Montreal, Que.
A. D. TURNBULL, <i>Manager, Research and Development</i> . . . . .	Trail, B.C.
J. F. M. DOUGLAS, <i>Manager, Market Research</i> . . . . .	Montreal, Que.
E. H. GAUTSCHI, <i>Manager, Sales Development</i> . . . . .	Montreal, Que.



## Principal Active Subsidiary Companies

### Wholly Owned

#### **Cominco Products, Inc.** — incorporated by Cominco in 1956.

President — F. E. BURNET, Spokane, Washington, U.S.A.

Major activity is to warehouse, mix and market Cominco fertilizers in the United States. This company also markets metal products and manufactures and markets preforms for the electronics industry. Sales taken into revenue in 1963 totalled \$32,067,000.

#### **Montana Phosphate Products Company** — acquired by Cominco in 1938.

President — F. E. BURNET, Garrison, Montana, U.S.A.

This company holds phosphate reserves near Garrison and Maxville, Montana, and in 1963 mined and sold to Cominco the 464,000 tons phosphate rock required for its fertilizer operations at Trail and Kimberley, B.C. The company also carries out mineral exploration in the United States.

#### **National Hardware Specialties Limited** — acquired by Cominco in 1959.

President — J. F. BUCKINGHAM, Dresden, Ontario.

This company owns and operates a die-casting plant at Dresden and, through its subsidiary, Luster Corporation of Canada Limited, operates a plating plant at Wallaceburg, Ontario. Sales for the year were \$1,703,000. In December 1963 a majority interest was acquired in Schultz Die Casting Company of Canada, Limited.

### Others

#### **West Kootenay Power and Light Company, Limited.**

President — R. G. ANDERSON, Trail, B.C.

Cominco holds all the common shares of this company which owns and operates a hydro-electric power plant on the Kootenay River and a distribution system providing public utility service in southern British Columbia. The company also operates Cominco's hydro-electric plants under management contract.

#### **Pine Point Mines Limited.**

President — W. G. JEWITT, Trail, B.C.

Cominco holds 78% of the issued shares of this company and under contract acts as its manager and agent. The major asset is the large lead-zinc property near Pine Point, N.W.T., now being prepared for production.

#### **Pacific Coast Terminals Co. Ltd.**

President — W. S. BROWN, New Westminster, B.C.

Cominco holds 60% of the issued shares of this company which owns and operates storage warehouse and dock facilities at New Westminster, B.C. and operates bulk-loading facilities at Port Moody, B.C. owned by its subsidiary, Pacific Coast Bulk Terminals Limited.

#### **Rycon Mines Limited.**

President — B. E. HURDLE, Yellowknife, N.W.T.

Cominco has a 60% interest in this company and mines and treats its gold ore in conjunction with the adjoining Con operations in the Northwest Territories.

#### **Coast Copper Company Limited.**

President — B. E. HURDLE, Trail, B.C.

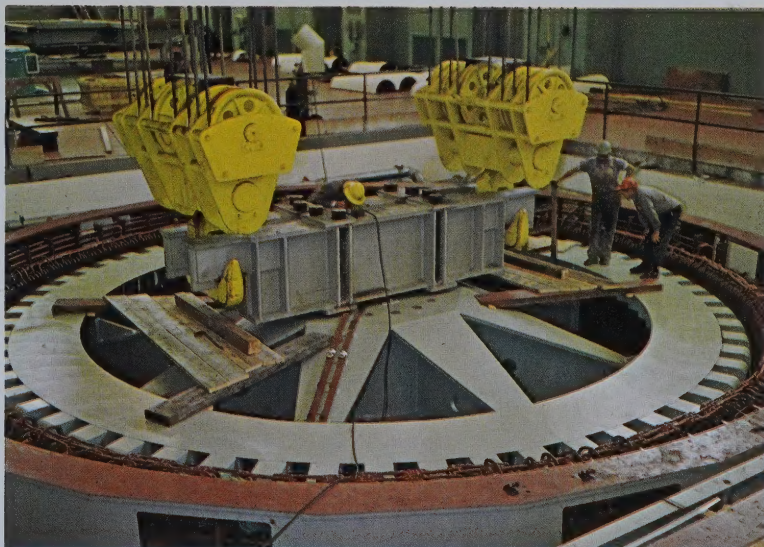
This company, in which Cominco has an 83% interest, owns a copper mine in Northern Vancouver Island. Under management contract Cominco is operating this mine and treating the ore in its mill at Benson Lake.

#### **Sunro Mines Limited.**

President — B. E. HURDLE, Trail, B.C.

Cominco has a 77% interest in this company whose copper property on Vancouver Island is being operated under lease by Cowichan Copper Company.

Installing a third 120,000 horsepower generating unit at the Company's Waneta hydro-electric plant on the Pend-d'Oreille River, south of Trail, B.C. The plant was brought into operation in 1954 with two units having a total capacity of 240,000 horsepower. This third unit, completed in 1963, was installed to meet the Company's increasing power requirements.



The Corra Linn hydro-electric plant on the Kootenay River, northeast of Trail, B.C., is one of several Company-owned power plants serving Cominco's mining, metallurgical and chemical operations in southeastern B.C. The plant generates 57,000 horsepower and its gates control water storage on Kootenay Lake and provide water for power production at this and downstream installations.





## Products

### Metals

Lead • Zinc  
Bismuth • Cadmium  
Indium • Gold  
Silver • Antimonial Lead  
Pig Iron • Copper and Tin Concentrates

### Fabricated Metal Products

Zinc Extrusions  
Cadmium and Zinc Plating Anodes  
Zinc Anodes for Cathodic Protection

### Electronic Materials\*

*High Purity Metals (99.999% and 99.9999% Pure)*

Aluminum • Antimony  
Arsenic • Bismuth  
Cadmium • Gold • Indium  
Lead • Silver • Tin  
Tellurium • Thallium • Zinc  
Preforms also available

#### *Compound Semiconductors*

Indium Antimonide  
Indium Arsenide

#### *Thermo-Electric Materials*

Bismuth Telluride

*\*Available in fabrications to customers' specification.*

### Chemical Fertilizers

Ammonium Sulphate  
Ammonium Nitrate  
Urea  
Anhydrous and Aqua Ammonia  
Nitrogen Solutions  
Ammonium Phosphates  
Ammonium Nitrate-Phosphates  
Complete Fertilizers  
Ammonium Phosphate Solutions  
Phosphoric Acid  
Nitrogen-Sulphur Solutions  
Zinc Fertilizer Compound

### Chemicals

Ammonia • Urea  
Chlorine • Caustic Soda  
Sulphuric Acid • Oleum  
Sulphur Dioxide • Urea Feed Compound

TADANAC BRAND

COMINCO BRAND

ELEPHANT BRAND

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trade marks of the Company





**COMINCO**